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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,804	02/09/2001	David L. Goodale	2048-039	8653

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PATENT LEGAL DEPARTMENT/A-42-C
BECKMAN COULTER, INC.
4300 N. HARBOR BOULEVARD
BOX 3100
FULLERTON, CA 92834-3100

EXAMINER	
QUAN, ELIZABETH S	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/780,804	GOODALE ET AL.
	Examiner	Art Unit
	Elizabeth Quan	1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-30* is/are pending in the application.

4a) Of the above claim(s) *11-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-10 and 21-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 8, 9, 28, 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 8, 9, 28, 29 are rendered indefinite since it is unclear how gear rack teeth and saw teeth are structurally different from each other. The drawings appear to show that the gear rack teeth and saw teeth are the same.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4-7, 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,598,393 to Mater.

Mater discloses an apparatus for piercing poles comprising a piercing blade (120) having a longitudinal axis and a zigzagged cross-section that is perpendicular to said axis and means for moving the blade for piercing comprising a carriage assembly (22,50) for moving the blade and means for driving the carriage assembly (90) (figs. 1-10; col. 2, line 11-col. 5, line 36). The piercing blade has at least one sharpened tip (129,132,136,138) for piercing and spreading the

load applied on the blade (fig. 7; col. 2, line 68-col. 3, line 44). An alignment block assembly restrains the pole when the piercing blade is being withdrawn after piercing the pole (figs. 9 and 10; col. 3, line 67-col. 4, line 23). The alignment block assembly comprises a latch assembly for latching the alignment block assembly when the piercing blade is being withdrawn from the pole to prevent the container from being moved by friction with the withdrawn blade (figs. 9 and 10; col. 3, line 67-col. 4, line 23). The latch assembly comprises a trigger movable between a latching position to securely hold the pole in position when the piercing blade is being withdrawn from the pole and unlatched position to lower the pole onto the chains after the piercing blade has been withdrawn from the pole (figs. 9 and 10; col. 3, line 67-col. 4, line 23). The latch assembly comprises an actuator engaged with the trigger wherein the actuator has locking means (figs. 9 and 10; col. 3, line 67-col. 4, line 23). When the trigger moves to the latching position, the actuator causes it locking means to matingly lock with a fixed complimentary locking means to latch the alignment assembly (figs. 9 and 10; col. 3, line 67-col. 4, line 23). When the trigger moves to the unlatched position, the actuator causes its locking means to unlock from the fixed complimentary locking means to unlatch the alignment assembly (figs. 9 and 10; col. 3, line 67-col. 4, line 23).

Since the claims have not positively recited the cap, the cap has not been accorded patentable weight.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 8, 9, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,598,393 to Mater in view of U.S. Patent No. 3,310,990 to Zettel or U.S. Patent No. 3,273,248 to Halverstadt or U.S. Patent No. 1,485,460 to Johnston.

Mater fails to disclose that the actuator and fixed complimentary locking means are gear rack teeth or saw teeth. It is noted that the Applicant has not distinguished between gear rack teeth and saw teeth. It appears that the Applicant is differentiating the teeth by different methods of making teeth. Method limitations are accorded no patentable weight in apparatus claims if the prior art teaches or suggests the structural limitations. Gear rack teeth and saw teeth have been

treated as the same structural element with different names. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Mater to use gear rack teeth or saw teeth since it is a very well known mechanical locking structure to securely hold two structures in the desired position as taught or suggested by Zettel or Halverstadt or Johnson.

5. Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,598,393 to Mater.

Mater fails to disclose that the actuator is spring-biased. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a spring-biased actuator since it is a very well known mechanical structure for absorbing shock, restricting moving beyond desired positions, and biasing structures toward a certain position.

Response to Arguments

6. Applicant's arguments filed 3/16/2004 have been fully considered but they are not persuasive.

7. Applicant argues that Mater cannot anticipate claim 1 because Mater fails to teach a piercing blade of any kind much less a piercing blade with a longitudinal axis and a zigzagged cross-section that is perpendicular to the axis. Applicant argues that what the Examiner refers to as a piercing blade is not a piercing blade but a drill bit. Applicant argues that a drill bit cannot be regarded as the same as or equivalent to a piercing blade.

8. Examiner maintains that a drill bit is a type of piercing blade. According to http://www.m-w.com, pierce is defined as to run into or through as a pointed weapon does, to make a hole through, or to force or make a way into or through; and blade is defined as the

cutting part of an implement. A drill bit is a piercing blade since it is a cutting part of an implement that runs into or through as a pointed weapon does, makes a hole through, and forces or makes a way into or through. Mater's abstract states: A pair of aligned drills each includes a drill tube carrying a drill bit including a forward pilot pin, forward cutters of a smaller diameter and rearward cutters of a larger diameter. Column 1, lines 10 and 11 of Mater states: This invention relates to a pole-boring machine, and more particularly to a machine for precisely boring a hole in a pole. Column 2, lines 68-column 3, line 44 of Mater states: The bit (120) includes a tapered, tapped, counterbored mounting sleeve (126) screwed onto the tube (96), and a tapered, tapped, drill carrying sleeve (128) is screwed onto the forward end of the sleeve (126). A pair of carbide outer cutters (129) are carried by a rigid somewhat z-shaped crossmember (130) brazed to and extending beyond the outer end or lip portion of the sleeve (128), and a pair of carbide inner cutters (132) are carried by a rigid, somewhat z-shaped crossmember (134) in advance of the cutters (129). The cutters extend inwardly and somewhat rearwardly from outer ends thereof, as do cutting edges (136) and (138) of the cutters, respectively. A pointed, cylindrical pilot pin (140) extends forwardly from the center of the members (130) and (134). The cutting edges (136) and (138) are the forward edges of slightly relieved front faces (142) and (144) of the cutters (129) and (132) and faces (146) and (148). Ends (150) and (152) also are slightly relieved to provide clearance behind cutting edges (154) and (156) extending parallel to the longitudinal axis of the drill tube (96). The pilot pin (140) is pushed into the center of the pole ahead of the cutters and the cutting edges of the cutters (132) extend equidistantly from the pilot pin and lie in a plane normal to the coincident axes of the pilot pin and the tubes (96) and (110), which may be termed the axis of the drill. The cutting edges (136) lie in a plane normal to

the axis of the drill and extend outwardly from the inner ends thereof, which are inside a circle generated by the outer ends of the edges (138) to points substantially beyond that circle...The alternating cutters (129) and (132) are spaced 90 degrees apart, and the cutting edges (138) are positioned at least five-sixteenths inch forwardly of the cutting edges (136) along the axis of the drill to prevent clogging. The cutting edges (138) bore a smaller hole in the pole in advance of the cutting edges (136), which bore a larger hole concentric to the smaller hole. These passages confirm that the drill bit is a piercing blade since it is a cutting implement that makes a hole through a wooden pole. Examiner considers the entire drill bit (120) including the cutters (129,132) supported by z-shaped crossmembers (130,134) as the piercing blade since the cutters and z-shaped crossmembers function together in moving through the pole and drilling a hole through it and Mater discloses them as parts of the drill bit assembly. The cutters may align with edges of the crossmembers (i.e. cutters (132) aligns with the edges of the crossmember (134)), such that cutting is performed at the edges of the crossmembers. Whether or not the z-shaped crossmembers perform the actual cutting, the z-shaped crossmembers can be considered a piercing blade since it is capable of performing the functions of a piercing blade, such as cutting and making holes in wood or other objects. As noted above, Mater describes the cutting edges of the cutters lying in a plane normal to the coincident axes of the pilot pin and the tubes (96) and (110), which may be termed the axis of the drill. Furthermore, fig. 6 shows the piercing blade with a longitudinal axis along which the pilot pin lies, and fig. 7, which is a cross-sectional view of the piercing blade taken along line 7-7 of fig. 6, shows the piercing blade with a zigzagged cross-section that is perpendicular to the longitudinal axis along which the pilot pin lies. The

disclosure and figures confirm that the piercing blade has a longitudinal axis along which the pilot pin lies and a zigzagged cross-section that is perpendicular to the axis.

9. Applicant argues that Mater fails to teach an alignment arm for moving the blade in a linear motion to pierce a cap on a container. Applicant argues that the alignment arm for moving the blade in claim 1 is neither the same as nor equivalent to a means for moving a drill bit as taught by Mater. Applicant refers to the instant specification on page 6, lines 17-28 to establish that the carriage assembly moves an alignment arm in a linear motion to drive the piercing blade. Applicant argues that Mater relies on a rotation motion for drilling.

10. Examiner maintains that Mater does teach an alignment arm for moving the blade in a linear motion. Mater not only relies on a rotation motion for drilling but also a linear motion to push the drill bit into the pole to make a hole through the entire length of the pole. The linearity and straightness of the pole require the alignment arm to move the blade in a linear motion to feed the drill bit through the pole. Mater's abstract states: The guide tube is rotated slowly to dislodge chips and facilitate movement of the guide tube into the bore being formed. A carriage slidable on tubular ways and guides slidable on the ways support the guide tube and is moved forwardly slowly by a cable drive to feed the drill and is returned rapidly by the cable drive. The drills are moved forwardly from opposite ends of the pole to be drilled until one drill reaches the end of its feed stroke and then this drill is retracted while the other drill completes its stroke. Column 1, lines 29-32, 36-43, and 55-61 of Mater states: Another object of the invention is to provide a drill in which an inner drill tube drives a drill bit forming a bore large enough to slidably receive an outer guide tube journaling the drill tube. Another object of the invention is to provide a drill supported by guides, which are initially spaced apart, and by a carriage which

pushes the guides forwardly toward a pole as a bore is formed in the pole. Preferably, the air is introduced into the drill through a rotary coupling sealingly engaging both the guide tube and the drill tube, and the guide tube preferably is rotated slowly to facilitate feed of the guide tube into the bore. The carriage is movable along ways, and guides rotatably supporting the guide tube at spaced points therealong and slidable on the ways preferably are provided. Column 4, lines 30-51 states: As the carriages are moved in boring, the carriages sequentially push the guides (34) along the ways (24) and (52) toward the pole. To prevent the drilling assemblies (18) and (20) from running into each other as the bore is completed through the entire length of the pole, actuators (290) mounted on the carriage drives (25) and (54) engage interlocking limit switches to stop the carriage drive (25) in a clearing position if the drilling assembly (18) has not completed its stroke until the drilling assembly (18) completes its stroke, the drive (54) is reversed to retract the drilling assembly (18) and the drilling assembly (18) reaches a clearing position, at which time its actuator (290) actuates a limit switch to restart the drive (25)...The drives (25) and (54) feed the drilling assemblies forwardly as fast as the drilling permits, and retract the drilling assemblies much more rapidly, the motors (90) and (160) being driven continuously so that the tubes (96) and (110) are continuously rotated to aid in withdrawing the drilling assemblies from the bores. "Operation" of columns 4-6 further describes how the alignment arm effects linear motion to the blade. As carriages (22) and (50) are moved in their drill strokes, they engage and push the adjacent guides (34) along the ways (14) and (24) and then these guides engage and push along the ways the next guides (34). As the carriages are retracted, chains connecting them to the adjacent guides (34) and connecting the guides (34) pull the guides (34) back to their start positions. The carriages (22) and (50) move in their drilling

strokes until the carriage (50) completes its stroke or until the carriages approach a minimum distance apart. Mater discloses: "the linear feed of the drilling assemblies is about 19 feet per minute" (col. 5, line 36-col. 6, line 1). Mat also discloses that: "The holes drilled in wooden poles by the above described machine are kept very straight by the above relationship of the guide tube (110), the drill tube (96) and the diameter of the drill but, which is just slightly greater than the external diameter of the guide tube. The machine serves to rapidly bore holes in opposite ends of a woody pole upward of 40 feet in length with the holes meeting at the center of the pole with misalignment held to a small fraction of an inch." These passages confirm that the alignment arms move the drill bit in a linear motion by a series of guides, guide tubes, carriages, and chains to drill as straight of a hole as possible through the center of a very straight wooden pole along its entire length. The drill bit undergoes rotational motion to facilitate the drilling of the hole but the alignment arm supporting the drill bit must also move the drill bit in a linear motion in order to force or push forward the drill bit into and through the wooden pole. Mater expresses a desire to drill holes from opposite ends of the pole that meet at the center of the pole, which emphasizes that the alignment arms must move in a linear direction from the opposite ends of the pole the same and consistent height from the ground to the center of the pole.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (571) 272-1261. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elizabeth Quan
Examiner
Art Unit 1743

eq

Jill Warden
Supervisory Patent Examiner
Technology Center 1700